

## EAST Search History

## EAST Search History (Prior Art)

Ref #	Hits	Search Query	DBs	Default Operator	Plurals	Time Stamp
L3	3	("4058163").PN.	US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO; DERWENT; IBM_TDB	ADJ	ON	2009/11/03 16:41
L4	2344	((166/380) or (166/285) or (166/177.6) or (166/177.7)).OCLS.	US-PGPUB; USPAT; USOCR	OR	OFF	2009/11/03 16:43
L5	23	("2743083"   "2746721"   "2780438"   "3640351"   "3894818"   "3899033"   "3933209"   "3941196"   "4027282"   "4439318"   "4817739"   "4819745"   "4830122"   "4953595"   "4979577"   "5009272"   "5048622"   "5190114"   "5662180"   "6279670"). PN.	US-PGPUB; USPAT; USOCR	ADJ	ON	2009/11/03 16:43
L6	34	(US-20030168212-\$ or US-20070187112-\$).did. or (US-6279670-\$ or US- 7405998-\$ or US- 5190114-\$ or US- 5009272-\$ or US- 6691778-\$ or US- 6321836-\$ or US- 6053261-\$ or US- 3894818-\$ or US- 4890682-\$ or US- 7017681-\$ or US- 6571870-\$ or US- 6062324-\$ or US- 5582247-\$ or US- 4958691-\$ or US- 4462471-\$ or US- 7434623-\$ or US- 7219726-\$ or US- 7139219-\$ or US- 6736209-\$ or US- 6725923-\$ or US- 6637520-\$ or US- 6550534-\$ or US-	US-PGPUB; USPAT; USOCR	ADJ	ON	2009/11/03 16:43

		4630689-\$ or US- 4548281-\$ or US- 4384625-\$ or US- 3610347-\$).did. or (US- 5439290-\$ or US- 5361830-\$ or US- 7168494-\$ or US- 7044230-\$ or US- 5607017-\$).did. or (US- 2743083-\$).did.				
L7	2	"5439290".pn.	US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO; DERWENT; IBM_TDB	ADJ	ON	2009/11/03 17:34
S1	2277	((166/380) or (166/285) or (166/177.6) or (166/177.7)).CCLS.	US-PGPUB; USPAT; USOCR	OR	OFF	2009/04/27 10:52
S2	23	("2743083"   "2746721"   "2780438"   "3640351"   "3894818"   "3899033"   "3933209"   "3941196"   "4027282"   "4439318"   "4817739"   "4819745"   "4830122"   "4953595"   "4979577"   "5009272"   "5048622"   "5190114"   "5662180"   "6279670"). PN.	US-PGPUB; USPAT; USOCR	ADJ	ON	2009/04/27 11:10
S3	13	("2743083"   "2780438"   "4819745"   "4830122"   "4953595"   "4979577"   "5009272"   "5048622"   "5190114").PN. OR ("6279670").URPN.	US-PGPUB; USPAT; USOCR	ADJ	ON	2009/04/27 11:14
S4	1	(S2 or S3) and (gel\$4 or gellation)	US-PGPUB; USPAT; USOCR	ADJ	ON	2009/04/27 11:21
S5	25	(S2 or S3)	US-PGPUB; USPAT; USOCR	ADJ	ON	2009/04/27 11:22
S6	3	S5 and (downhole near motor)	US-PGPUB; USPAT; USOCR	ADJ	ON	2009/04/27 11:22
S7	2	S6 and (rotary)	US-PGPUB; USPAT; USOCR	ADJ	ON	2009/04/27 11:22

S8	3	S5 and cement\$4	US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO; DERWENT; IBM_TDB	ADJ	ON	2009/04/27 11:52
S9	10	S5 and friction	US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO; DERWENT; IBM_TDB	ADJ	ON	2009/04/27 12:05
S10	13	S5 and pulse	US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO; DERWENT; IBM_TDB	ADJ	ON	2009/04/27 13:51
S11	4	S10 and (positive or negative)	US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO; DERWENT; IBM_TDB	ADJ	ON	2009/04/27 13:51
S12	7	S5 and shock and (above or below)	US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO; DERWENT; IBM_TDB	ADJ	ON	2009/04/27 13:54
S13	21	S5 and (rotat\$4 or transverse)	US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO; DERWENT; IBM_TDB	ADJ	ON	2009/04/27 14:01
S14	2	"6279670".pn.	US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO; DERWENT; IBM_TDB	ADJ	ON	2009/04/27 14:06
S15	1	S14 and (cement\$4 or friction or gel\$4 or gellation or axial\$4 or rotat\$4 or surface or weight or plural\$4 or frequency or (pressure near pulse) or amplitude)	US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO; DERWENT; IBM_TDB	ADJ	ON	2009/04/27 14:11

S16	3	S5 and cement\$4	US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO; DERWENT; IBM_TDB	ADJ	ON	2009/04/27 14:35
S17	52119	(agitat\$4 or vibrat\$4 or (pressure near pulse) or (restrict\$4 near flow)) and (cement\$4)	US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO; DERWENT; IBM_TDB	ADJ	ON	2009/04/27 15:00
S18	289	(S1 or S2 or S3) and S17	US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO; DERWENT; IBM_TDB	ADJ	ON	2009/04/27 15:01
S19	29	S18 and (pressure near pulse)	US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO; DERWENT; IBM_TDB	ADJ	ON	2009/04/27 15:02
S20	125	("0701391"   "1748460"   "20040011522"   "20040156265"   "20050061503"   "2053982"   "2113396"   "2287157"   "2620162"   "2713472"   "2743083"   "2746721"   "2750154"   "2780438"   "2902258"   "3001322"   "3029554"   "3065805"   "3096833"   "3105560"   "3194325"   "3295837"   "3307641"   "3346058"   "3415330"   "3416613"   "3431984"   "3441094"   "3568783"   "3603410"   "3768576"   "3807512"   "3810602"   "3923099"   "3958217"   "4398769"   "4434863"   "4520886"   "4683951"   "4718490"   "4807709"   "4817739"   "4819745"   "4830122"   "4919204"   "4950201"	US-PGPUB; USPAT; USOCR	ADJ	ON	2009/04/27 15:08

		"4953595"   "4979577"   "5009272"   "5048622"   "5190114"   "5297631"   "5484016"   "5586602"   "5836389"   "6012521"   "6241019"   "6279670"   "6318468"   "6336502"   "6405796"   "6405797"   "6460618"   "6619394"   "6691778"   "6832655"   "6851473"   "7198105").PN. OR ("2743083"   "5009272"   "5190114"   "6279670"   "7405998"). URPN.				
S21	24	S20 and cement\$4	US-PGPUB; USPAT; USOCR	ADJ	ON	2009/04/27 15:08
S22	3	(pressure near pulse) near cement\$4	US-PGPUB; USPAT; USOCR	ADJ	ON	2009/04/27 15:12
S23	9	(US-6279670-\$ or US- 7405998-\$ or US- 5190114-\$ or US- 5009272-\$ or US- 6691778-\$ or US- 6321836-\$ or US- 6053261-\$ or US- 3894818-\$).did. or (US- 2743083-\$).did.	USPAT; USOCR	ADJ	ON	2009/04/27 15:49
S24	9	S23 and (retriev\$4 or drill\$4 or soluble)	US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO; DERWENT; IBM_TDB	ADJ	ON	2009/04/27 15:50
S25	4	"4890682".pn. or "2003168212".pn.	US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO; DERWENT; IBM_TDB	ADJ	ON	2009/04/27 16:44
S26	1	"4890682".pn. or "2003168212".pn.	US-PGPUB; USPAT; USOCR	ADJ	ON	2009/04/27 16:44
S27	36	ivannikov.in.	US-PGPUB; USPAT; USOCR	ADJ	ON	2009/04/27 16:45
S28	2	"4890682".pn. or "20030168212".pn.	US-PGPUB; USPAT; USOCR	ADJ	ON	2009/04/27 16:46
S29	2	S28 and cement\$4	US-PGPUB; USPAT; USOCR	ADJ	ON	2009/04/27 16:47

S30	1	"6736209".pn.	US-PGPUB; USPAT; USOCR	ADJ	ON	2009/04/27 16:48
S31	9	("4462471"   "4702315"   "4747466"   "4958691"   "5582247"   "5997172"   "6062324"   "6571870"). PN. OR ("6736209"). URPN.	US-PGPUB; USPAT; USOCR	ADJ	ON	2009/04/27 16:48
S32	482	("0701391"   "1232800"   "1654833"   "1748460"   "1775673"   "1934252"   "20040011522"   "20040156265"   "20050061503"   "2053982"   "2113396"   "2187088"   "2199969"   "2287157"   "2620162"   "2635852"   "2641445"   "2644671"   "2713472"   "2721056"   "2738956"   "2743083"   "2746721"   "2750154"   "2755069"   "2780438"   "2800884"   "2806533"   "2868511"   "2902258"   "2942851"   "3001322"   "3029554"   "3065805"   "3096833"   "3105560"   "3139933"   "3149685"   "3193027"   "3194325"   "3213941"   "3235014"   "3262507"   "3295837"   "3307641"   "3318397"   "3346058"   "3353362"   "3361220"   "3365202"   "3368632"   "3392795"   "3415330"   "3416487"   "3416613"   "3425499"   "3431984"   "3433311"   "3441094"   "3452830"   "3456746"   "3477237"   "3509948"   "3520362"   "3532174"   "3544075"   "3562807"   "3564932"   "3568783"	US-PGPUB; USPAT; USOCR	ADJ	ON	2009/04/27 16:49

"3570611" | "3578081"  
| "3603410" |  
"3610347" | "3616703"  
| "3633688" |  
"3648769" | "3682258"  
| "3718205" |  
"3743017" | "3768576"  
| "3783954" |  
"3800889" | "3804185"  
| "3807512" |  
"3807513" | "3808820"  
| "3810602" |  
"3853187" | "3860902"  
| "3898815" |  
"3920083" | "3923099"  
| "3926267" |  
"3946819" | "3958217"  
| "3978931" |  
"3987858" | "4018290"  
| "4058163" |  
"4111271" | "4186807"  
| "4209070" |  
"4236580" | "4252189"  
| "4252210" |  
"4257482" | "4280557"  
| "4291395" |  
"4295535" | "4299279"  
| "4342364" |  
"4384625" | "4398769"  
| "4402495" |  
"4403665" | "4429743"  
| "4434863" |  
"4436452" | "4462471"  
| "4471838" |  
"4509593" | "4512401"  
| "4520886" |  
"4544031").PN. OR  
("4548281" | "4553443"  
| "4557295" |  
"4613003" | "4630689"  
| "4640360" |  
"4658897" | "4667742"  
| "4671379" |  
"4673037" | "4683951"  
| "4702315" |  
"4702325" | "4702343"  
| "4716555" |  
"4718490" | "4722417"  
| "4747466" |  
"4783771" | "4788467"  
| "4805725" |  
"4805727" | "4807709"  
| "4815328" |  
"4815557" | "4817712"  
| "4817739" |  
"4819745" | "4824258"  
| "4830122" |

		"4874061"   "4890682"   "4905778"   "4913234"   "4919204"   "4950201"   "4953595"   "4954998"   "4958691"   "4979577"   "4979829"   "4991685"   "5007479"   "5009272"   "5048622"   "5121363"   "5156223"   "5159160"   "5190114"   "5229552"   "5229554"   "5234056"   "5297631"   "5321213"   "5361830"   "5484016"   "5505262"   "5515918"   "5562170"   "5586602"   "5595243"   "5595244"   "5722495"   "5803182"   "5836389"   "5871277"   "5957220"   "5997172"   "6009047"   "6009948"   "6012521"   "6062324"   "6152222"   "6241019"   "6279670"   "6318468"   "6336502"   "6405796"   "6405797"   "6460618"   "6619394"   "6691778"   "6702204"   "6705396"   "6725923"   "6736209"   "6832655"   "6851473"   "7198105"). PN. OR ("2003/0168212"   "2743083"   "3894818"   "4462471"   "4890682"   "4958691"   "5009272"   "5190114"   "5582247"   "6053261"   "6062324"   "6279670"   "6321836"   "6571870"   "6691778"   "7017681"   "7405998").URPN.				
S33	350	S32 not (S31 or S20)	US-PGPUB; USPAT; USOCR	ADJ	ON	2009/04/27 16:49



S34	28	(US-20030168212-\$). did. or (US-6279670-\$ or US-7405998-\$ or US- 5190114-\$ or US- 5009272-\$ or US- 6691778-\$ or US- 6321836-\$ or US- 6053261-\$ or US- 3894818-\$ or US- 4890682-\$ or US- 7017681-\$ or US- 6571870-\$ or US- 6062324-\$ or US- 5582247-\$ or US- 4958691-\$ or US- 4462471-\$ or US- 7434623-\$ or US- 7219726-\$ or US- 7139219-\$ or US- 6736209-\$ or US- 6725923-\$ or US- 6637520-\$ or US- 6550534-\$ or US- 4630689-\$ or US- 4548281-\$ or US- 4384625-\$ or US- 3610347-\$).did. or (US- 2743083-\$).did.	US-PGPUB; USPAT; USOCR	ADJ	ON	2009/04/27 17:01
S35	16	S34 and cement\$4	US-PGPUB; USPAT; USOCR	ADJ	ON	2009/04/27 17:01
S36	28	(US-20030168212-\$). did. or (US-6279670-\$ or US-7405998-\$ or US- 5190114-\$ or US- 5009272-\$ or US- 6691778-\$ or US- 6321836-\$ or US- 6053261-\$ or US- 3894818-\$ or US- 4890682-\$ or US- 7017681-\$ or US- 6571870-\$ or US- 6062324-\$ or US- 5582247-\$ or US- 4958691-\$ or US- 4462471-\$ or US- 7434623-\$ or US- 7219726-\$ or US- 7139219-\$ or US- 6736209-\$ or US- 6725923-\$ or US- 6637520-\$ or US- 6550534-\$ or US- 4630689-\$ or US- 4548281-\$ or US- 4384625-\$ or US-	US-PGPUB; USPAT; USOCR	ADJ	ON	2009/04/28 10:11

		3610347-\$.did. or (US-2743083-\$.did.				
S37	15	S36 and frequency and (amplitude or magnitude)	US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO; DERWENT; IBM_TDB	ADJ	ON	2009/04/28 10:12
S38	9	S37 and cement\$4	US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO; DERWENT; IBM_TDB	ADJ	ON	2009/04/28 10:12
S39	3	"3557875".pn.	US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO; DERWENT; IBM_TDB	ADJ	ON	2009/04/28 10:18
S40	2	S39 and cement\$4	US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO; DERWENT; IBM_TDB	ADJ	ON	2009/04/28 10:18
S41	2	S40 and rotat\$4	US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO; DERWENT; IBM_TDB	ADJ	ON	2009/04/28 10:34
S42	0	S41 and motor	US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO; DERWENT; IBM_TDB	ADJ	ON	2009/04/28 10:35
S43	41	("1676785"   "2072982"   "2309791"   "2730176"   "3049189"   "3205945"   "3209833"   "3239005"   "3302714"   "3335801"   "3360056"). PN. OR ("3557875"). URPN.	US-PGPUB; USPAT; USOCR	ADJ	ON	2009/04/28 10:48
S44	29	S43 and cement\$4	US-PGPUB; USPAT; USOCR	ADJ	ON	2009/04/28 10:50
S45	6	S44 and pulse	US-PGPUB; USPAT; USOCR	ADJ	ON	2009/04/28 10:50

S46	1	"5439290".pn. and vibrat \$4 and cement\$4 and pulse	US-PGPUB; USPAT; USOCR	ADJ	ON	2009/04/28 10:52
S47	1	"6279670".pn. and pulse	US-PGPUB; USPAT; USOCR	ADJ	ON	2009/04/28 11:15
S48	5	S36 and negative and positive	US-PGPUB; USPAT; USOCR	ADJ	ON	2009/04/28 11:36
S49	1	"6279670".pn. and shock	US-PGPUB; USPAT; USOCR	ADJ	ON	2009/04/28 12:39
S50	13	(S36 or S39 or S43) and cement\$4 and pulse	US-PGPUB; USPAT; USOCR	ADJ	ON	2009/04/28 12:56
S51	13	(S36 or S39 or S43) and cement\$4 and pulse and (drill\$4 or mill\$4)	US-PGPUB; USPAT; USOCR	ADJ	ON	2009/04/28 12:57
S52	113283	(negative near pulse) or (decreas\$4 near (pressure or pulse))	US-PGPUB; USPAT; USOCR	ADJ	ON	2009/04/28 13:00
S53	1266	S52 same (cement\$4 or annulus)	US-PGPUB; USPAT; USOCR	ADJ	ON	2009/04/28 13:00
S54	2	(S36 or S39 or S43) and S53	US-PGPUB; USPAT; USOCR	ADJ	ON	2009/04/28 13:00
S55	1303204	(dissolv\$4 or soluble or solubility)	US-PGPUB; USPAT; USOCR	ADJ	ON	2009/04/28 14:12
S56	1	(S36 or S39 or S43) and S55	US-PGPUB; USPAT; USOCR	ADJ	ON	2009/04/28 14:12
S57	63917	S55 and vibrat\$4	US-PGPUB; USPAT; USOCR	ADJ	ON	2009/04/28 14:13
S58	566	S57 and ("175".clas. or "166".clas.)	US-PGPUB; USPAT; USOCR	ADJ	ON	2009/04/28 14:13
S59	331	S58 and cement\$4	US-PGPUB; USPAT; USOCR	ADJ	ON	2009/04/28 14:13
S60	2960	(dissolv\$4 or soluble or solubility) near (tool or device or apparatus or agitator or vibrator or drill)	US-PGPUB; USPAT; USOCR	ADJ	ON	2009/04/28 14:14
S61	187	S60 and cement\$4	US-PGPUB; USPAT; USOCR	ADJ	ON	2009/04/28 14:14
S62	27	S61 and ("175".clas. or "166".clas.)	US-PGPUB; USPAT; USOCR	ADJ	ON	2009/04/28 14:14

S63	23	("2743083"   "2746721"   "2780438"   "3640351"   "3894818"   "3899033"   "3933209"   "3941196"   "4027282"   "4439318"   "4817739"   "4819745"   "4830122"   "4953595"   "4979577"   "5009272"   "5048622"   "5190114"   "5662180"   "6279670"). PN.	US-PGPUB; USPAT; USOCR	ADJ	ON	2009/04/28 14:17
S64	1	S63 and (dissolv\$4 or soluble)	US-PGPUB; USPAT; USOCR	ADJ	ON	2009/04/28 14:17
S65	37	S60 and ("175".clas. or "166".clas.)	US-PGPUB; USPAT; USOCR	ADJ	ON	2009/04/28 14:20
S66	7	eddisson.in. and (soluble or dissolv\$4 or chemical)	US-PGPUB; USPAT; USOCR	ADJ	ON	2009/04/28 14:22
S67	1564	(robertson or innes).in. and (soluble or dissolv \$4 or chemical)	US-PGPUB; USPAT; USOCR	ADJ	ON	2009/04/28 14:23
S68	1551	S67 not (wellbore or (well near bore))	US-PGPUB; USPAT; USOCR	ADJ	ON	2009/04/28 14:24
S69	13	S67 not S68	US-PGPUB; USPAT; USOCR	ADJ	ON	2009/04/28 14:24
S70	1	"5607017".pn.	US-PGPUB; USPAT; USOCR	ADJ	ON	2009/04/28 14:33
S71	23	("3141513"   "3164206"   "3208530"   "3420299"   "5479986"). PN. OR ("5607017"). URPN.	US-PGPUB; USPAT; USOCR	ADJ	ON	2009/04/28 14:33
S72	22	("20020096365"   "20030168214"   "20030188871"   "2152306"   "2261292"   "3099318"   "4262702"   "4286629"   "4432419"   "4678037"   "4688641"   "4834184"   "5224540"   "5271468"   "5607017"   "5709269"   "6095247"   "6328110"   "6397950").PN. OR ("7044230").URPN.	US-PGPUB; USPAT; USOCR	ADJ	ON	2009/04/28 14:34
S73	1	S70 and dissolv\$4	US-PGPUB; USPAT; USOCR	ADJ	ON	2009/04/28 14:50

S74	17	(S36 or S39 or S43) and (pulse or pulsation)	US-PGPUB; USPAT; USOCR	ADJ	ON	2009/04/28 15:03
S75	13	S74 and cement\$4	US-PGPUB; USPAT; USOCR	ADJ	ON	2009/04/28 15:03
S76	41	(S36 or S39 or S43) and frequency	US-PGPUB; USPAT; USOCR	ADJ	ON	2009/04/28 15:15
S77	22	(S36) and frequency	US-PGPUB; USPAT; USOCR	ADJ	ON	2009/04/28 15:15
S78	1	"10576884"	US-PGPUB; USPAT; USOCR	ADJ	ON	2009/04/28 15:32
S79	235	((166/177.6) or (166/177.7)).CCLS.	US-PGPUB; USPAT; USOCR	OR	OFF	2009/04/28 15:34

### EAST Search History (Interference)

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**11/ 3/ 2009 5:50:55 PM**

**C:\ Documents and Settings\ egottlieb\ My Documents\ EAST\ Workspaces\ 10576884.wsp**